Remarks

In furtherance of the Request for Continued Examination filed herewith, Applicant respectfully requests reconsideration of this Application and consideration of the foregoing amendment, which is hereby submitted in accordance with 37 C.F.R. § 1.114.

Upon entry of the foregoing reply, claims 1-3, 5-21, 23-42, and 44-65 are pending in the application, with 1, 23, 44, 64, and 65 being the independent claims. New claims 64 and 65 are sought to be added.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Allowable Subject Matter

In the Advisory Action, the Examiner sustains the objection to claims 41 and 62 as being dependent upon a rejected base claim. The Examiner states that claims 41 and 62 would be allowable if rewritten in independent form. (Paper No. 08242004, and Paper No. 10, page 6).

Applicant appreciates the Examiner's conditional allowance of these claims. As such, new claim 64 and 65 are added above to rewrite claims 41 and 62, respectively, in independent form. As indicted by the Examiner, these claims should be in condition for allowance, and Applicant respectfully requests reconsideration and allowance thereof.

Rejections under 35 U.S.C. § 103

In the Advisory Action, the Examiner sustains the rejection of claims 1-3, 5-21, 23-40, 42, 44-61 and 63 under 35 U.S.C. § 103, as allegedly being obvious in view of one or more of the following documents:

    (1) U.S. Patent 6,154,215 to Hopcroft (herein referred to as "Hopcroft"); and

    (2) U.S. Patent Application Publication 2002/0063704 A1 to Sowizral *et al.* (herein referred to as "Sowizral"). (Paper No. 08242004, and Paper No. 10, pages 2-6).

Each rejection is discussed separately below.

a.   *Hopcroft Rejection*

In the Advisory Action, the Examiner sustains the rejection of claims 1-3, 5-19, 21, 23-37, 39, 40, 42, 44-58, 60, 61 and 63 under 35 U.S.C. § 103, as allegedly being obvious over Hopcroft. (Paper No. 08242004, and Paper No. 10, page 2). Applicant respectfully traverses.

Hopcroft does not teach or suggest Applicant's invention as recited in the aforementioned claims. For example, Hopcroft lacks the following as recited in independent claims 1, 23, and 44:

    1)   regarding claim 1, Hopcroft does not teach or suggest "an optimization configuration manager for *accepting user configuration information to said optimization process*, said user configuration information comprising selection of one or more of said at least one atomic optimization";

    2)   regarding claim 23, Hopcroft does not teach or suggest "*receiving user input identifying an atomic optimization and any associated parameters*"; and

3) regarding claim 44, Hopcroft does not teach or suggest "computer readable program code means for causing the computer to *receive user input identifying an atomic optimization* and any associated parameters".

As presented in Applicant's previous Amendment and Reply (filed January 7, 2004), the method and apparatus disclosed in Hopcroft do not enable a user to "configure" an optimization process, or communicate "user input identifying an atomic optimization". On the contrary, Hopcroft discloses

a method and apparatus for creating and maintaining multiple scene graphs for the display of a computer generated object. The *user initially creates a user scene graph* which is comprised [sic] a number of nodes arranged in a hierarchical organization...In the present invention *this "user" scene graph is organized according to the dictates of the user* so that it can be more easily comprehended and used by a human. Thereupon, the computer system automatically converts this user scene graph into a *separate "rendering" scene graph*. The organization of this rendering scene graph is different from that of the user scene graph in that *the latter is optimized* so that the object can be rendered faster and more efficiently by the computer system....Thereby, the first scene graph is displayed to the user so that *the user can add, delete, or otherwise modify the object*, but the object is rendered for display according to the second scene graph. (Hopcroft, col. 2, lines 44-66, emphasis added).

Hence, as quoted above, Hopcroft only allows a user to "create" and "modify" a "scene graph," which is subsequently converted into a "rendering scene graph" that can be optimized by the "computer system". However, Hopcroft does not teach or suggest that its "user" can create or modify the specific "atomic optimizations" that are performed on the rendering scene graph.

To support his rejection of claim 1, the Examiner relies on the following passage from Hopcroft to teach the Applicant's "optimization configuration manager for *accepting user configuration information to said optimization process*, said user

configuration information comprising selection of one or more of said at least one atomic optimization":

> In the present invention, the different representations are inter-related such that when the user makes a change in the user representation, the change is automatically and transparently carried over and reflected in the other representation(s). When the **computer** actually goes to render the scene graph, it **selects** and uses the representation that **has been specially optimized** for rendering purposes. (Hopcroft, col. 2, lines 32-38, emphasis added).

This passage does not teach or suggest Applicant's optimization manager as recited in claim 1. The user, in Hopcroft, is not providing "configuration information" to the "optimization process", and the user is especially not "selecting one or more atomic optimizations". On the contrary, the user is merely making a "change in the user representation" of a "scene graph". Hopcroft, thereafter, describes that a computer "renders the scene graph" (i.e., "the other representation(s)"), and the computer "selects and uses the representation *that has been specially optimized* for rendering purposes". No mention is made of a user's selecting any atomic optimizations that can be performed on the "other representation(s)". Even though (as noted by the Examiner in the Advisory Action) Hopcroft describes that "the different representations are inter-related such that when the user makes a change in the user representation, the change is automatically and transparently carried over and reflected in the other representation(s)", nowhere does this passage remotely suggest that the "user changes" include the "selection of...[an] atomic optimization." In other words, Hopcroft's user has no control over the selection of the specific optimizations that are selected and implemented by the computer. Selecting a representation of a scene graph is not the equivalent to selecting an atomic optimization.

With respect to independent claims 23 and 44, the Examiner has not provided any evidence to argue that Hopcroft teaches or suggests "*user input identifying an atomic optimization* and any associated parameters". Nonetheless, as discussed above,

Hopcroft's method and apparatus for creating a scene graph does not teach or suggest receiving "user input identifying an atomic optimization and any associated parameters".

In the Office Action, the Examiner also cites column 3, lines 56-57 of Hopcroft to argue that it discloses "a computer system for practicing [Hopcroft's] invention, which is to create and configure an optimization process." (Paper No. 10, page 7). Applicant respectfully disagrees. Column 3, lines 56-57 only cites:

> Referring to FIG. 1, a computer system upon which the present invention may be practiced is shown.

This passage does not describe an optimization process. This passage goes on to read:

> Initially, an original 3-D *scene* is created and described in a file format (e.g., VRML) by a programmer. The programmer describes both the components of the *scene* (e.g., geometry, materials, lights, images, movies, and sounds) as well as the relationships among those components. These relationships may be static (e.g., a transformation hierarchy) or dynamic (e.g., the values of transformations in the hierarchy). ***Changes in one element of the scene*** may be made to effect changes in others. For instance, a change in the position of a light-bulb shaped geometry can be made to cause a change in the position of a light source. In addition, information about the locations and characteristics of viewpoints may be included in the scene. Once created, the files are stored in the storage device 104 (e.g., hard disk drive) of computer system 110. (Hopcroft, col. 3, lines 57-67, and col. 4, lines 1-4, <u>emphasis</u> <u>added</u>).

This passage also does not describe an optimization process. It merely describes the user's ability to create and change elements of a scene. Again, as stated above, a computer, thereafter, converts the user's scene into a rendering scene graph, which can be optimized also by the computer. However, Hopcroft's does not teach or suggest that the user can configure or select any atomic optimizations that can be performed on the rendering scene graph.

Accordingly, Hopcroft does not teach or suggest claims 1, 23, and 44. Claims 2, 3, and 5-21 depend from claim 1; claims 24-42 depend from claim 23; and claims 45-63 depend from claim 44. As such, these dependent claims are patentable over Hopcroft for at least the reasons stated above, in addition to the features, elements, and/or limitation recited therein. Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection of the aforementioned claims, and allowance thereof.

b.   Hopcroft and Sowizral Rejection

In the Advisory Action, the Examiner sustains the rejection of claims 20, 38, and 59 under 35 U.S.C. § 103, as allegedly being obvious over Hopcroft in view of Sowizral. (Paper No. 08242004, and Paper No. 10, page 5). Applicant respectfully traverses.

Claims 20, 38, and 59 depend from claims 1, 23, and 44, respectively, and are patentable over Hopcroft for at least the reasons stated above in addition to the features, elements, and/or limitations recited therein. In other words, Hopcroft does not teach or suggest that a user can configure or select an atomic optimization for a scene graph.

Sowizral does not cure the defects of Hopcroft since Sowizral also does not teach or suggest that a user can configure or select an atomic optimization for a scene graph.

Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection of the aforementioned claims, and allowance thereof.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will

expedite prosecution of this application, the Examiner is invited to telephone the
undersigned at the number provided.

      Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

                            Respectfully submitted,

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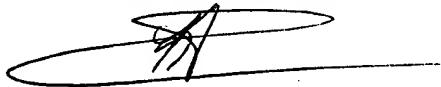
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